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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/784,205	02/24/2004	Hiroynki Tokimatsu	04175.0056	9233
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FINNEGAN, HENDERSON, FARABOW, GARRETT & DUNNER LLP 901 NEW YORK AVENUE, NW WASHINGTON, DC 20001-4413			EXAMINER DICKER, DENNIS T	
			ART UNIT 2625	PAPER NUMBER
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/784,205

Applicant(s)

TOKIMATSU, HIROYUKI

Examiner

DENNIS DICKER

Art Unit

2625

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 20 November 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-15 and 18-24 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-15 and 18-24 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 24 February 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 11/20/2008 has been entered.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1-5, 7-9, 11-15, 18-19 and 22-24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ishiguru Hisashi (hereinafter "Hisashi '290" JP 11-127290) in view of Owa et al (hereinafter "Owa '971" US 6,348,971) and further in view of Hatano Eiji (hereinafter "Eiji" JP 2001-249781).

With respect to **Claim 1**, Hisashi '290 teaches an image forming system (i.e., **Para 007, System of a plurality of printers**) comprising: communication unit for interconnection (i.e., **Para 0007, Network connecting plurality of printers**) ; and a plurality of electrophotographic image forming apparatuses (i.e., **Para 0007, Plurality of**

printers) each visualizing a latent image on a latent image carrier generated based on input image data (i.e., Para 0007, Printers can print on an latent image carrier image data received from an input device) by a developer and transferring the visualized image to a recording material (i.e., Para 0007 and Para 0012, Computer is connected to printers where the image data is transferred to the printers and the visualized image is transferred to a recording material by unit of a developer), which are connected via said communication unit (i.e., Para 0021, connected by a via communication network).

Hisashi '290 does not explicitly teach storing usage histories of the latent image carriers of the image forming apparatuses and having a function of controlling image forming apparatuses outputting the image based on the carrier usage history data stored in memory to achieve approximately the same deteriorated conditions.

However, the mentioned claimed limitations are well known in the art as evidenced by Owa '971. In particular, Owa '971 teaches the use of storing usage histories (i.e., Col. 4 lines 6-17, **status monitor stores usage history for a plurality of printers**) of the latent image carriers of the image forming apparatuses (i.e., Fig. 4, **example of usage histories**) and having a function of controlling image forming apparatuses outputting the image based on the carrier usage history data stored in memory (i.e., Col. 7 lines 23-39, **an optimum printer is controlled based on usage history data**) and Eiji teaches controlling image forming apparatuses based on the carrier usage history to achieve approximately the same deteriorates conditions (i.e., Para 0003,0011 and 0020).

In view of this, it would have been obvious to one having ordinary skill in the art at the time of invention was made to modify the image forming system of Hisashi '290 as taught by Owa '971 and Eiji since Owa '971 suggested in Col. 2 lines 1-6 that such a modification would provide a printing system and a printing method that can select an optimum printer for printing from among the printers connected to a host computer and enable effective use of the printers without the need for the user to keep track of the performance and specifications of available printers and suggested by Eiji that such a modification would also provide optimal printing in a network where a drum is deteriorates from extensive use where the best apparatus is continuously controlled to achieve the same conditions among the plurality of apparatuses when distributing a job.

With respect to **Claim 2**, Hisashi '290 teaches an image forming system wherein the usage history of said latent image carrier is based on the number of transferred pages obtained with reference to an operating time (**i.e., Para 0079, the user can base the amount of operating time remaining on the amount of pages transferred which is obtained from each printer**).

With respect to **Claim 3**, Hisashi '290 teaches an image forming system wherein the usage history of said latent image carrier is modified according to a characteristic of deterioration through use of each latent image carrier (**i.e., Para 0070 , The usage history modified based on the remaining latent image carriers**).

With respect to **Claim 4**, Hisashi '290 teaches an image forming system wherein the image forming apparatuses outputting the image are selected so that the usage histories of the latent image carriers of the image forming apparatuses are

approximately the same. (i.e., **Para 0069 and Para 0078, the printer with the least number of available pages is chosen based on the number of available latent image carriers so that they are all approximately the same in all available printers**).

With respect to **Claim 5**, Hisashi '290 teaches an image forming system (i.e., **Para 007, System of a plurality of printers**) comprising: communication unit for interconnection (i.e., **Para 0007, Network connecting plurality of printers**); and a plurality of electrophotographic image forming apparatuses (i.e., **Para 0007, Plurality of printers**) each visualizing a latent image on a latent image carrier generated based on input image data by a developer (i.e., **Para 0007, Printers can print on an latent image carrier, image data received from an input device**) and transferring the visualized image to a recording material (i.e., **Para 0007 and Para 0012, Computer is connected to printers where the image data is transferred to the printers and the visualized image is transferred to a recording material by unit of a developer**), which are connected via said communication unit (i.e., **Para 0021, connected by a via communication network**).

Hisashi '290 does not explicitly teach the image forming system having memory to store developer usage histories data corresponding to a deterioration of a characteristic of the developer through use of the developer in the image forming apparatuses and having a function of controlling image forming apparatuses outputting the image based on the developer usage history data stored in the memory to achieve approximately the same deteriorated conditions.

However, the mentioned claimed limitations are well known in the art as evidenced by Owa '971. In particular, Owa '971 teaches the use of having memory (**i.e., Col. 27 line 8-Col. 28 line 2**) to store developer usage histories data corresponding to a deterioration of a characteristic of the developer through use of the developer in the image forming apparatuses (**i.e., Col. 17 lines 23-34, many variations of a consumable may be implemented to claimed invention such as the deterioration of a characteristic of a developer**) and having a function of controlling image forming apparatuses outputting the image based on the developer usage history data stored in the memory (**i.e., Col. 7 lines 23-39, an optimum printer is controlled based on usage history data**) and Eiji teaches controlling image forming apparatuses based on the carrier usage history to achieve approximately the same deteriorates conditions (**i.e., Para 0003,0011 and 0020**).

In view of this, it would have been obvious to one having ordinary skill in the art at the time of invention was made to modify the image forming system of Hisashi '290 as taught by Owa '971 and Eiji since Owa '971 suggested in Col. 2 lines 1-6 that such a modification would provide a printing system and a printing method that can select an optimum printer for printing from among the printers connected to a host computer and enable effective use of the printers without the need for the user to keep track of the performance and specifications of available printers and suggested by Eiji that such a modification would also provide optimal printing in a network where a drum is deteriorates from extensive use where the best apparatus is continuously controlled to achieve the same conditions among the plurality of apparatuses when distributing a job.

With regards to the image forming system of **Claim 7**, the limitations of the claim 7 are corrected by limitations of claim 5 above. The steps of claim 7 read into the function steps of claim 5.

With regards to the image forming system of **Claim 8**, the limitations of the claim 8 are corrected by limitations of claim 5 above. The steps of claim 8 read into the function steps of claim 5.

With respect to **Claim 9**, Hisashi '290 teaches an image forming system (i.e., **Para 007, System of a plurality of printers**) comprising: communication unit for interconnection (i.e., **Para 0007 , Network connecting plurality of printers**); and a plurality of electrophotographic image forming apparatuses (i.e., **Para 0007, Plurality of printers**) each visualizing a latent image on a latent image carrier generated based on input image' data by unit of developer (i.e., **Para 0007, Printers can print on an latent image carrier image data received from an input device**) and transferring the visualized image to a recording material (i.e., **Para 0007 and Para 0012, Computer is connected to printers where the image data is transferred to the printers and the visualized image is transferred to a recording material by unit of a developer**), which are connected via said communication unit (i.e., **Para 0021, connected by a via communication network**).

Hisashi '290 does not explicitly teach an image forming system having memory for storing usage histories after maintenance of the image forming apparatuses and having a function of controlling image forming apparatuses outputting the image based on the usage history data to achieve approximately the same deteriorated conditions.

However, the mentioned claimed limitations are well known in the art as evidenced by Owa '971 and Hopper '391. In particular, Owa'971 teaches the use of having a function of controlling image forming apparatuses outputting the image based on the usage history data (i.e., **Para 0021, connected by a via communication network**) and Eiji teaches the use of an image forming system having memory for storing usage histories after maintenance of the image forming apparatuses (i.e., **Para 0004, acquisition means acquires present situation for every consumable good**) and having a function of controlling image forming apparatuses outputting the image based on the usage history data to achieve approximately the same deteriorated conditions (i.e., **Para 0003,0011 and 0020**).

In view of this, it would have been obvious to one having ordinary skill in the art at the time of invention was made to modify the image forming system of Hisashi '290 as taught by Owa '971 and Eiji since Owa '971 suggested in Col. 2 lines 1-6 that such a modification would provide a printing system and a printing method that can select an optimum printer for printing from among the printers connected to a host computer and enable effective use of the printers without the need for the user to keep track of the performance and specifications of available printers and suggested by Eiji that such a modification would also provide optimal printing in a network where a drum is deteriorates from extensive use where the best apparatus is continuously controlled to achieve the same conditions among the plurality of apparatuses when distributing a job.

With regards to the image forming system of **Claim 11**, the limitations of claim 11 are corrected by limitations of claim 9 above. The steps of claim 11 read into the function step of claim 9.

With regards to the image forming system of **Claim 12**, the limitations of claim 12 are corrected by limitations of claim 9 above. The steps of claim 12 read into the function step of claim 9.

With respect to **Claim 13**, Hisashi '290 teaches an image forming system (i.e., **Para 007, System of a plurality of printers**) comprising: a communication unit for interconnection (i.e., **Para 0007 , Network connecting plurality of printers**); and a plurality of electrophotographic image forming apparatuses (i.e., **Para 0007, Plurality of printers**) each visualizing a latent image on a latent image carrier generated based on input image data by a developer (i.e., **Para 0007, Printers can print on an latent image carrier image data received from an input device**) and transferring the visualized image to a recording material (i.e., **Para 0007 and Para 0012, Computer is connected to printers where the image data is transferred to the printers and the visualized image is transferred to a recording material by unit of a developer**), which are connected via said communication unit (i.e., **Para 0021, connected by a via communication network**).

Hisashi '290 does not explicitly teach an image forming system having memory to store information related to an average black ratio of developer after replacement and having a function of controlling image forming apparatuses outputting the image based

on the average black ratio obtained from the information to achieve the same deteriorated conditions.

However, the mentioned claimed limitations are well known in the art as evidenced by Owa '971, In particular, Owa'971 teaches the use of having memory (i.e., **Col. 27 line 8-Col. 28 line 2**) to store information related to an average black ratio of developer after replacement (i.e., **Col. 17 lines 23-34, the check result evaluation may include various modifications by those skilled and may include an average black ratio of the developer after replacement**) and having a function of selecting image forming apparatuses outputting the image based on the average black ratio obtained from the information (i.e., **Col. 7 lines 23-39, an optimum printer is selected based on usage history data**) and Eiji teaches controlling image forming apparatuses based on the carrier usage history to achieve approximately the same deteriorates conditions (i.e., **Para 0003,0011 and 0020**).

In view of this, it would have been obvious to one having ordinary skill in the art at the time of invention was made to modify the image forming system of Hisashi '290 as taught by Owa '971 and Eiji since Owa '971 suggested in Col. 2 lines 1-6 that such a modification would provide a printing system and a printing method that can select an optimum printer for printing from among the printers connected to a host computer and enable effective use of the printers without the need for the user to keep track of the performance and specifications of available printers and suggested by Eiji that such a modification would also provide optimal printing in a network where a drum is

deteriorates from extensive use where the best apparatus is continuously controlled to achieve the same conditions among the plurality of apparatuses when distributing a job.

With respect to **Claim 14**, the combination of Hisashi '290 and Owa '971 does not explicitly teach calculating the photographic densities during image formation successively, and calculates the average photographic densities from the usage histories and the successively calculated photographic densities.

However, the mentioned claimed limitations are well known in the art as evidenced by Eiji. In particular, Eiji teaches the use of calculating the photographic densities during image formation successively (**i.e., Para 0004, usage histories are measured**), and calculates the average photographic densities from the usage histories and the successively calculated photographic densities (**i.e., Para 0011**).

In view of this, it would have been obvious to one having ordinary skill in the art at the time of invention was made to modify the image forming system of Hisashi '290 as taught by Owa '971 and Eiji since Owa '971 suggested in Col. 2 lines 1-6 that such a modification would provide a printing system and a printing method that can select an optimum printer for printing from among the printers connected to a host computer and enable effective use of the printers without the need for the user to keep track of the performance and specifications of available printers and suggested by Eiji that such a modification would also provide optimal printing in a network where a drum is deteriorates from extensive use where the best apparatus is continuously controlled to achieve the same conditions among the plurality of apparatuses when distributing a job.

With regards to image forming system of **Claim 15**, the limitations of the claim 15 are corrected by limitations of claim 13 above. The steps of claim 15 read into the function step of claim 13.

With respect to **Claim 18**, the combination of Hisashi '290 and Owa '971 does not explicitly teach an image forming system wherein the developer contains color particles.

However, the mentioned claimed limitations are well known in the art as evidenced by Eiji. In particular, Eiji teaches the use of image forming system wherein the developer contains color particles (**i.e., Para 0008**).

In view of this, it would have been obvious to one having ordinary skill in the art at the time of invention was made to modify the image forming system of Hisashi '290 as taught by Owa '971 and Eiji since Owa '971 suggested in Col. 2 lines 1-6 that such a modification would provide a printing system and a printing method that can select an optimum printer for printing from among the printers connected to a host computer and enable effective use of the printers without the need for the user to keep track of the performance and specifications of available printers and suggested by Eiji that such a modification would also provide optimal printing in a network where a drum is deteriorates from extensive use where the best apparatus is continuously controlled to achieve the same conditions among the plurality of apparatuses when distributing a job.

With respect to **Claim 19**, Hisashi '290 teaches The image forming system wherein a part or all of the plurality of image forming apparatuses connected to each

other via said communication unit are of different models (**i.e., Para 0050, the Printers connected to each other are of different models**).

With respect to **Claim 22**, Hisashi '290 teaches an image forming system further comprising a host device control unit for selecting the image forming apparatuses outputting the image based on one of the data (**i.e., Drawing 2 and Para 0019, host device control unit for selecting an image forming apparatus based on the data**)

With respect to **Claim 23**, Hisashi '290 teaches The image forming system wherein said host device control unit is incorporated in at least one of the image forming apparatuses (**i.e., Para 0059 , host device control unit incorporated in one of image forming apparatuses**)

With respect to **Claim 24**, Hisashi '290 teaches an image forming system wherein said host device control unit is connected to said image forming apparatuses independently of the image forming apparatuses connected to each other (**i.e., Para 0059, host device control unit is connected to the master machine independent of the image forming machines**).

4. Claims 6 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hisashi '290, Owa '971 and Eiji as applied to claim 5 above, and further in view of Hopper et al (hereinafter "Hopper '391" US 7,061,391).

With respect to **Claim 6**, Owa '971 teaches an image forming system, wherein the usage history is based on the number of transferred pages obtained (**i.e., Fig. 4**).

The combination of Hisashi '290, Owa '971 and Eiji does not explicitly teach an image forming system wherein the usage history of the developer is based on the number of transferred *pages with reference to an operating time* of a developing device which contains the developer and supplies it to the latent image carrier, or recording materials.

However, the mentioned claimed limitations are well known in the art as evidenced by Hopper '391, In particular, Hopper '391 teaches the use of an image forming system wherein the usage history of the developer is based on the number of transferred pages with reference to an operating time of a developing device(**i.e., Col 3 Lines 56-58 and Col. 2 Lines 7-16, Usage history of developer is based on number of transferred pages, where the user may choose a image forming apparatus operating time depending on available developer level**), which contains the developer and supplies it to the latent image carrier, or recording materials. (**i.e., Col. 2 Lines 20-24, on the basis of the remaining developer a determination are made to output remaining developer for an image forming apparatus onto a latent image carrier**)

In view of this, it would have been obvious to one having ordinary skill in the art at the time of invention was made to modify the image forming system of Hisashi '290, Owa '971 and Eiji as taught by Hopper '391 since Hopper '391 suggested in Col. 1 Lines 35-38 that such a modification would provide additional status information such as paper toner before the resource depletion level to allow for more active monitoring and maintenance of printers.

With respect to **Claim 10**, the combination of Hisashi '290, Owa '971 and Eiji does not explicitly teach an image forming system, wherein the usage history after maintenance is based on the number of transferred pages obtained with reference to an operating time for image formation of the image forming apparatus or recording materials

However, the mentioned claimed limitations are well known in the art as evidenced by Hopper '391, In particular, Hopper '391 teaches the use of image forming system wherein the usage history after maintenance is based on the number of transferred pages (i.e., **Fig. 2 , the number pages remaining is an estimate of when the next maintenance is needed**) obtained with reference to an operating time for image formation of the image forming apparatus or recording materials (i.e., **Fig. 2, The amount of pages remaining and the number of pages used in a period of time will give the user an estimate of the operating time till the next maintenance**).

In view of this, it would have been obvious to one having ordinary skill in the art at the time of invention was made to modify the image forming system of Hisashi '290, Owa '971 and Eiji as taught by Hopper '391 since Hopper '391 suggested in Col. 1 Lines 35-38 that such a modification would provide additional status information such as paper toner before the resource depletion level to allow for more active monitoring and maintenance of printers.

5. Claims 20 and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hisashi '290, Owa '971 and Eiji as applied to Claim 1 above and further in view of Iwata et al (hereinafter "Iwata '718 "7,173,718).

With respect to **Claim 20**, the combination of Hisashi '290 and Owa '971 does not explicitly teach an image forming system further comprising a display unit for displaying a list of the image forming apparatuses selected for outputting the image

However, the mentioned claimed limitations are well known in the art as evidenced by Iwata '718, In particular, Iwata '718 teaches the use of an image forming system (i.e., **Fig. 1, Image forming system**) further comprising a display unit for displaying a list of the image forming apparatuses selected for outputting the image (i.e., **Fig. 18, List of image forming apparatuses selected for outputting an image**)

In view of this, it would have been obvious to one having ordinary skill in the art at the time of invention was made to modify the image forming system of Hisashi '290, Owa '971 and Eiji as taught by Iwata '718 since Iwata '718 suggested in Col. 2 Lines 21-23 that such a modification would ensure favorable resulting prints with good operatability.

With respect to **Claim 21**, Hisashi '290 teaches an image forming system further comprising an operating unit (i.e., **70 of Drawing 2, control unit**) for giving an instruction to execute the output with specifying a part or the entire image forming apparatuses displayed on said display unit. (i.e., **Drawing 2 and Para 0019, gives an instruction to execute the output and for selecting an image forming apparatus displayed**).

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to DENNIS DICKER whose telephone number is (571)270-3140. The examiner can normally be reached on Monday -Thursday 7:30 A.M. to 5:00 P.M..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Twyler Haskins can be reached on (571) 272-7406. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/D. D./
Examiner, Art Unit 2625
2/4/2009

/Twyler L. Haskins/
Supervisory Patent Examiner, Art Unit 2625